

CLAIMS

1. A method for processing brittle material in which a laser light from a laser light source irradiates the brittle material and an irradiating position
5 of the laser light is moved along a predetermined line; the method comprising:

irradiating simultaneously the laser light from a plurality of the laser light sources onto the brittle material, and moving an irradiating range of the laser light, which is set to a predetermined shape, over a surface of the
10 brittle material.

2. The method for processing brittle material according to claim 1, wherein a plurality of optical wave guides that guide the laser light from the laser light sources to the brittle material are provided, and

15 wherein composite laser light irradiates the surface of the brittle material, with these optical wave guides bundled together.

3. The method for processing brittle material according to claim 1 or claim 2,

20 wherein a plurality of laser light sources of differing output intensities are combined, and a composite intensity distribution of the laser light that irradiates the surface of the brittle material is adjusted.

4. The method for processing brittle material according to claims 1, 2 or
25 3,

wherein an irradiating spot position of the plurality of laser lights on the surface of the brittle material is set so as to obtain the intended shape of the beam of the laser light irradiated onto the brittle material.

30 5. An apparatus for processing brittle material in which a laser light

from a laser light source irradiates the brittle material and an irradiating position of the laser light moves along a predetermined line, comprising:

a plurality of laser light sources,

an optical wave guide for guiding a laser light from those laser light
5 sources to a surface of the brittle material,

a scanning means for moving a position at which the laser light is irradiated onto the brittle material,

a light intensity measuring means for measuring the light intensity on a laser light irradiating face of the brittle material; and

10 a transporting means for transporting the light intensity measuring means along the laser light irradiating face of the brittle material,

wherein the apparatus for processing the brittle material is configured so as to use an output from the light intensity measuring means as measured information of a composite intensity distribution of the
15 plurality of laser lights irradiated onto the surface of the brittle material.

6. The method for processing brittle material according to claim 4,

wherein a time at which light emission of the plurality of laser light sources starts is controlled with a predetermined sequential time lag, so as to
20 sequentially move the irradiating spot position of the plurality of laser lights.